



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/864,004	05/23/2001	Tomi-Pekka Takalo	460-010353-US(PAR)	1873

7590 03/29/2004
Clarence A. Green
Perman & Green, LLP
425 Post Road
Fairfield, CT 06430

EXAMINER

PHU, SANH D

ART UNIT	PAPER NUMBER
2682	6

DATE MAILED: 03/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/864,004

Applicant(s)

TAKALO ET AL.

Examiner

Sanh D Phu

Art Unit

2682

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3&4.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Information Disclosure Statement

1. The IDS filed 6/22/2001 & 11/10/2003 have been considered and recorded in the file.

Claim Rejections – 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-17, are rejected under 35 U.S.C. 102(b) as being anticipated by Bath et al (5,701,594).

Regarding to claim 1, see Fig. 1, col. 1, lines 9 to col. 3, line 13, Bath et al disclose a method for implementing a transceiver (Fig. 1), in which method radio-frequency (RF) signals are transmitted and received with a transceiver for communicating information, wherein a radio-frequency signal received at a

Art Unit: 2682

receiving stage (1, 2, 3, 4, 5, 6, 7, 8, 9, 10,11, 12, 13, 14, 15) is subjected to at least a first filtering step (6,11), in which a desired receiving signal is separated from the signal with a filter (6,11), and a signal to be transmitted at a transmission stage (20,21, 22, 23, 24,11, 25, 26,6, 27,2,1) is subjected to at least a second filtering step (6,11), in which a desired transmission signal is separated from the signal with a filter (6,11), to be transmitted, characterized in that the same filter (6,11) is used at least partly in said first and second filtering steps (6,11) (see col. 1, lines 25–33).

Regarding to claim 2, Bath et al disclose that the method characterized at the receiving step, also at least a second filtering step is performed, in which the received signal is subjected to rejection of signals outside of the receiving frequency range substantially defined for the system (filter is Band-pass Filter, see col. 1, lines 42–47 and col. 2, line 12).

Regarding to claim 3, Bath et al disclose that the method characterized at the receiving stage, also at least a first conversion step (15) is taken, in which the received analog signal is converted to digital form (see col. 1, lines 9–24).

Regarding to claim 4, Bath et al disclose that the method characterized at the transmission stage, also at least a second conversion step (20) is taken, in which the digital signal to be transmitted is converted to analog form (see col. 1, lines 9-24).

Regarding to claim 5, Bath et al disclose the method characterized at the receiving stage, before the first filtering step, at least a first mixing step (5, 8, 13) is taken, in which the received radio-frequency signal is mixed with a local oscillator signal (see col. 2, lines 8-29).

Regarding to claim 6, the method characterized in that the received signal is converted at the first mixing step (mixer 5) to a baseband signal (see col. 2, lines 7-29).

Regarding to claim 7, Bath et al disclose that the method characterized in that the method also comprises elimination of a DC offset voltage from the signal formed in the first mixing step (a local oscillator provides a frequency) (see col. 2, lines 7-29).

Regarding to claim 8, Bath et al disclose that the method characterized in that the received signal is converted in the first mixing step to at least one intermediate frequency (IF filter 6) (see col. 2, lines 7-29).

Regarding to claim 9, Bath et al disclose a transceiver (1)(Figure) comprising transmission means (20,21, 22, 23, 24, 11, 25, 26,6, 27,2,1) for transmitting radio-frequency signals and receiving means (1, 2, 3, 4, 5, 6, 7, 8, 9, 10,11, 12, 13, 14, 15) for receiving radio-frequency signals, which receiving means comprise filtering means (6,11) for filtering the received radio-frequency signal to separate a desired receiving signal, and which transmission means comprise at least filtering means (6,11) for separating a desired transmission signal to be transmitted as a radio-frequency signal, characterized in that said transmission means and receiving means comprise at least partly a common filter (6,11) (see col. 1, lines 25-33) .

Regarding to claim 10, Bath et al disclose that the transceiver (1) characterized in that it also comprises at least a band filter (BF) to reject signals outside of the receiving frequency range substantially defined in the system,

Art Unit: 2682

from the received signal (filter is Band-pass Filter, see col. 1, lines 42-47 and col. 2, line 12).

Regarding to claim 11, Bath et al disclose that the transceiver characterized in that it also comprises means (15) for converting the received analog signal to digital form (see col. 1, lines 9-24).

Regarding to claim 12, Bath et al disclose that the transceiver characterized in that it also comprises at least means (20) for converting the digital signal to be transmitted to analog form (see col. 1, lines 9-24).

Regarding to claim 13, Bath et al disclose that the transceiver characterized in that it also comprises at least one mixer (5,8,13,23,25,26) to mix a local oscillator signal with the received radio-frequency signal (see col. 2, lines 7-16).

Regarding to claim 14, Bath et al disclose that the transceiver characterized in that the received signal is arranged to be converted in said mixer (5, 8,13,23,25,26) to a baseband signal (see col. 2, lines 7-29).

Regarding to claim 15, Bath et al disclose that the transceiver characterized in that said means (20) for converting the digital signal to be

Art Unit: 2682

transmitted to analog form is also used for eliminating a DC offset voltage from the signal formed in said mixer (5, 8,13,23,25,26) (see col. 2, lines 7–29).

Regarding to claim 16, Bath et al disclose that the transceiver characterized in that the received signal is arranged to be converted in said mixer (5, 8,13,23,25,26) to at least one intermediate frequency (see col. 2, lines 7–29).

Regarding to claim 17, Bath et al disclose that a wireless communication device (MS) comprising transmission means (21,22,23,24,11,25,26,6,27,2,1) for transmitting radio–frequency signals and receiving means(1,2,3,4,5,6,7,8,9,10,11,12,13,14,15) for receiving radio–frequency signals, which receiving means comprise filtering means (6,11) for filtering the received radio–frequency signal to separate a desired receiving signal, and which transmission means comprise at least filtering means (6,11) for separating a desired transmission signal to be transmitted as a radio–frequency signal, characterized in that said transmission means and receiving means comprise at least partly a common filter (6,11) (see col. 1, lines 25–33).

Conclusion


4. References Dimon (4,320,531) is additionally cited because they are pertinent to the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sanh D Phu whose telephone number is (703) 305-8635. The examiner can normally be reached on 8:00-16:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on 703-301-6739. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-8635.

Sanh D. Phu
Examiner
Art Unit 2682


LEE NGUYEN
PRIMARY EXAMINER

SP

Application/Control Number: 09/864,004
Art Unit: 2682

Page 9